



SEQUENCE LISTING

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<120> Method For Accelerating The Rate of Mucociliary Clearance

<130> 98-736-A

<140> US 09/441,966
<141> 1999-11-17

<150> US 09/218,913
<151> 1998-12-22

<160> 105

<170> PatentIn version 3.1

check B6
<210> 1
<211> 179
<212> PRT
<213> Homo sapiens

<400> 1

A5
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg

115

120

125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Ala Val Ser

bio <210> 2
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<212> PRT
<213> Homo sapiens

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<222> (1)...(18)
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<400> 2

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Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30

Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45

Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
50 55 60

Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
65 70 75 80

Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
85 90 95

Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp

100

105

110

His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala
115 120 125

Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val
130 135 140

Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn
145 150 155 160

Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg
165 170 175

Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu
180 185 190

Ala Gly Ala Val Ser
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Lehrbuch
<210> 3
<211> 153
<212> PRT
<213> Homo sapiens

a 5
<400> 3

Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala
1 5 10 15

Cont
Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu
20 25 30

Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys
35 40 45

Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly
50 55 60

Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala
65 70 75 80

Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr
85 90 95

Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser
100 105 110

Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe
115 120 125

Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu
130 135 140

Ala Cys Met Leu Arg Cys Phe Arg Gln
145 150

Ref B
<210> 4
<211> 58
<212> PRT
<213> Homo sapiens

<400> 4

Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala
1 5 10 15

Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu
20 25 30

Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys
35 40 45

a⁵
cont
Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
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<210> 5
<211> 51
<212> PRT
<213> Homo sapiens

<400> 5

Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg
1 5 10 15

Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly
20 25 30

Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu
35 40 45

Lys Lys Cys
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<210> 6
<211> 58
<212> PRT
<213> Homo sapiens

<400> 6

Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
1 5 10 15

Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
20 25 30

Repetitive
Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
35 40 45

Glu Ala Cys Met Leu Arg Cys Phe Arg Gln
50 55

<210> 7
<211> 51
<212> PRT
<213> Homo sapiens

<400> 7

a⁵ Conf
Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg
1 5 10 15

Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly
20 25 30

Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met
35 40 45

Leu Arg Cys
50

<210> 8
<211> 92
<212> PRT
<213> Homo sapiens

Part 67
cont

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Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser
85 90

<210> 9

<211> 708

<212> DNA

<213> Artificial Sequence

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<223> Consensus DNA sequence of human Bikunin (Fig. 3).

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<223> "n" is any nucleotide.

<220>

<221> misc_feature

<222> (707)..(707)

<223> "n" is any nucleotide.

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ccgagaacgc agcatccacg acttctgcctt ggtgttgaag gtgggtggca gatgccggc 120

ctccatgcctt aggtgggtgtt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg 180

gggctgtgac ggaaacagca ataattacct gaccaaggag gagtgcctca agaaatgtgc 240

cactgtcaca gagaatgcca cgggtgacct ggccaccaggc aggaatgcag cggattcctc 300

tgcccaagt gctccagaa ggcaggattc tgaagaccac tccagcgata tttcaacta 360
tgaagaatac tgcaccgcca acgcagtcac tgggccttgc cgtgcacccct tcccacgctg 420
gtactttgac gtggagagga actcctgcaa taacttcattc tatggaggct gcccgggcaa 480
taagaacagc taccgctctg aggaggcctg catgctccgc tgcttccgccc agcaggagaa 540
tcctccctg ccccttggct caaagggtggt ggttctggcc ggggctgttt cgtgatggtg 600
ttgatcctt tcctggggag catccatggt cttactgatt ccgggtggca aggaggaacc 660
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Ruth Blot
<210> 10
<211> 197
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<213> Artificial Sequence

<220>
<223> Amino acids -18 to 179 of translation of consensus sequence in Fig. 3.
<400> 10

Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Leu Ser Gly Val
1 5 10 15

Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30

Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45

Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
50 55 60

Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
65 70 75 80

Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
85 90 95

Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp
100 105 110

His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala
115 120 125

Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val
130 135 140

Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn
145 150 155 160

Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg
165 170 175

Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu
180 185 190

Ala Gly Ala Val Ser
195

But B6
<210> 11
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<212> PRT
<213> Artificial Sequence

<220>
<223> Variants of human Bikunin.

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

*A5
Cont.*
<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE

Revised 7/7

<222> (21)..(26)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (42)..(42)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (45)..(47)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

*AS
AM*

<220>
<221> MISC_FEATURE
<222> (52)..(52)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (64)..(64)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa"

in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

Part B7

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<222> (112)..(112)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (114)..(114)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

Part B7

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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

A5
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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<220>
<221> MISC_FEATURE
<222> (137)..(137)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

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<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

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<222> (159)..(159)
<223> Each "Xaa" independently represents a naturally occurring amino acid residue except Cys, with the proviso that at least one "Xaa" in SEQ ID NO:11 is different from the corresponding amino acid residue of the native sequence (see page 10 of specification).

<400> 11

Ala Asp Arg Glu Arg Ser Ile Xaa Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Sub B
Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Ser
35 40 45

Asn Asn Tyr Xaa Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Xaa
50 55 60

A5
Thr Glu Asn Ala Thr Gly Asp Leu Ser Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Cont
Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu His Asp Ser
85 90 95

Ser Asp Met Phe Asn Tyr Xaa Glu Tyr Cys Thr Ala Asn Ala Val Xaa
100 105 110

Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Lys Asn
130 135 140

Ser Tyr Xaa Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Xaa Gln
145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Ala Val Ser

But the
<210> 12
<211> 393
<212> DNA
<213> Homo sapiens

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<222> (367)..(367)
<223> "n" is any nucleotide.

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<221> misc_feature
<222> (384)..(384)
<223> "n" is any nucleotide.

as cont
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<221> misc_feature
<222> (390)..(390)
<223> "n" is any nucleotide.

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accgagaacg cagcatccac gacttctgcc tggtgtcgaa ggtggtgggc agattccggg 120
cctccatgcc taggtggtgg tacaatgtca ctgacggatc ctgccagctg tttgtgtatg 180
ggggctgtga cgaaacacgc aataattacc tgaccaagga ggagtgcctc aagaaatgtg 240
ccactgtcac agagaatgcc acgggtgacc tggccaccag caggaatgca gcggattcct 300
ctgtcccaag tgctcccaga aggcaggatt cttgaagacc acttcagcga tatgtttcaa 360
ntattgnaag aataattgca ccgncaacgn att 393

<210> 13
<211> 110
<212> PRT
<213> Homo sapiens

<220>
<221> SIGNAL
<222> (1)..(18)
<223>

<400> 13

Pro Gly Arg Phe Ser Pro Gly Trp Asp Arg Cys Ser Ser Leu Gly Ser
1 5 10 15

Trp Pro Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
20 25 30

Lys Val Val Gly Arg Glu Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
35 40 45

Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
50 55 60

Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
65 70 75 80

Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
85 90 95

Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser
100 105 110

<210> 14
<211> 510
<212> DNA
<213> Homo sapiens

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<222> (424)..(424)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (481)..(481)
<223> "n" is any nucleotide.

Part B

<220>
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<222> (509)..(509)
<223> "n" is any nucleotide.

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gcaataatta cctgaccaag gaggagtgc tcaagaaatg tgccactgtc acagagaatg 60
ccacgggtga cctggccacc agcaggaatg cagcggattc ctctgtccca agtctccag 120
aaggcaggat tctgaagacc atccagcga tatgttcaac tatgaagaat actgcaccgc 180
caacgcagtc actgggcctt gccgtgcatt cttccacgc tggtaactttg acgtggagag 240
gaactcctgc aataacttca tctatggagg ctgccgggc aataagaaca gctaccgctc 300
tgaggaggcc tgcatgctcc gctgcttccg ccagcaggag aatcctcccc tgccccttgg 360
ctcaaagggtg gtggttctgg ccggggctgt ttcgtatgg tggtaatcct tttcctgggg 420
agcntccatg gtcttactga ttccgggtgg caaggaggaa ccaggagcgt gcccgtcgga 480
ncgtctggag ctccggagat gacaagggn 510

<210> 15
<211> 20
<212> PRT
<213> Homo sapiens

<400> 15

Leu Pro Asp Gln Gly Gly Val Pro Gln Glu Met Cys His Cys His Arg
1 5 10 15

A⁵
Glu Cys His Gly
20
Cont

<210> 16
<211> 427
<212> DNA
<213> Homo sapiens

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<222> (3)..(3)
<223> "n" is any nucleotide.

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<222> (11)..(12)
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<222> (17)..(17)
<223> "n" is any nucleotide.

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<222> (48)..(48)
<223> "n" is any nucleotide.

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<222> (425)..(425)
<223> "n" is any nucleotide.

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agaacgcagc atccacgact tctgcctgg tgcgaagggt gttggcagat gccgggcctc 120
catgcctagg tggtggtaca atgtcactga cggatcctgc cagctgtttg tgtatgggg 180
ctgtgacgga aacagcaata attacctgac caaggaggag tgcctcaaga aatgtgccac 240
tgtcacagag aatgccacgg gtgacctggc caccagcagg aatgcagcgg attcctctgt 300
cccaagtgtt cccagaaggc aggattctga agaccactcc agcgatatgt tcaactatga 360
agaatactgg caccgccaac gcattcactg ggcctgcgtg catccttccc acgctggtag 420
tttgncg 427

Q5
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<211> 423
<212> DNA
<213> Homo sapiens

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<223> "n" is any nucleotide.

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<221> misc_feature
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<223> "n" is any nucleotide.

<220>
<221> misc_feature

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<223> "n" is any nucleotide.

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ttctgcctgg tgtcgaaggt ggtgggcaga tgccgggcct ccatgcctag gtggtggtac 120
aatgtcactg acggatcctg ccagctgttt gtgtatgggg gctgtgacgg aaacagcaat 180
aattacctga ccaaggagga gtgcctcaag aaatgtgcca ctgtcacaga gaatgccacg 240
ggtgacctgg ccaccagcag gaatgcagcg gattcctctg tcccaagtgc tcccagaagg 300
caggattctg aagaccactc cagcgatatg ttcaactatg aagaatactg caccgccaac 360
gcagtcactg ggccttgcgt ggaatccttt cccacgctgg naatttngac gttgagaagg 420
aac 423

Part B
<210> 18
<211> 57
<212> PRT
<213> Unknown

<220>
<223> Kunitz-like domain of tissue factor pathway inhibitor precursor 1.
<400> 18

His Ser Phe Cys Ala Phe Lys Ala Asp Asp Gly Pro Cys Lys Ala Ile
1 5 10 15

Cont.
Met Lys Arg Phe Phe Asn Ile Phe Thr Arg Gln Cys Glu Glu Phe
20 25 30

Ile Tyr Gly Gly Cys Glu Gly Asn Gln Asn Arg Phe Glu Ser Leu Glu
35 40 45

Glu Cys Lys Lys Met Cys Thr Arg Asp
50 55

<210> 19
<211> 57
<212> PRT
<213> Unknown

<220>
<223> Kunitz-like domain of tissue factor pathway inhibitor precursor 1.
<400> 19

Pro Asp Phe Cys Phe Leu Glu Glu Asp Pro Gly Ile Cys Arg Gly Tyr
1 5 10 15

Ile Thr Arg Tyr Phe Tyr Asn Asn Gln Thr Lys Gln Cys Glu Arg Phe
20 25 30

Lys Tyr Gly Gly Cys Leu Gly Asn Met Asn Asn Phe Glu Thr Leu Glu
35 40 45

Glu Cys Lys Asn Ile Cys Glu Asp Gly
50 55

<210> 20

<211> 57

<212> PRT

<213> Unknown

<220>

<223> Kunitz-like domain of tissue factor pathway inhibitor precursor.

<400> 20

Pro Ser Trp Cys Leu Thr Pro Ala Asp Arg Gly Leu Cys Arg Ala Asn
1 5 10 15

Glu Asn Arg Phe Tyr Tyr Asn Ser Val Ile Gly Lys Cys Arg Pro Phe
20 25 30

Lys Tyr Ser Gly Cys Gly Gly Asn Glu Asn Asn Phe Thr Ser Lys Gln
35 40 45

Glu Cys Leu Arg Ala Cys Lys Lys Gly
50 55

<210> 21

<211> 57

<212> PRT

<213> Unknown

<220>

<223> Kunitz-like domain of tissue factor pathway inhibitor precursor 2.

<400> 21

Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu
1 5 10 15

Leu Leu Arg Tyr Tyr Tyr Arg Tyr Arg Thr Gln Ser Cys Arg Gln Phe
20 25 30

Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu
35 40 45

Ala Cys Asp Asp Ala Cys Trp Arg Ile
50 55

<210> 22

<211> 57

<212> PRT

<213> Unknown

<220>

<223> Kunitz-like domain of tissue factor pathway inhibitor precursor 2.

<400> 22

Pro Ser Phe Cys Tyr Ser Pro Lys Asp Glu Gly Leu Cys Ser Ala Asn
1 5 10 15

but Bk
Val Thr Arg Tyr Tyr Phe Asn Pro Arg Tyr Arg Thr Cys Asp Ala Phe
20 25 30

Thr Tyr Thr Gly Cys Gly Asn Asn Asp Asn Asn Phe Val Ser Arg Glu
35 40 45

Asp Ser Lys Arg Ala Cys Ala Lys Ala
50 55

as
<210> 23

<211> 57

<212> PRT

<213> Unknown

<220>

<223> Kunitz-like domain of amyloid precursor protein homologue.

<400> 23

Lys Ala Val Cys Ser Gln Glu Ala Met Thr Gly Pro Cys Arg Ala Val
1 5 10 15

Met Pro Arg Thr Thr Phe Asp Leu Ser Lys Gly Lys Cys Val Arg Phe
20 25 30

Ile Thr Gly Gly Cys Gly Asn Arg Asn Asn Phe Glu Ser Glu Asp

35

40

45

Tyr Cys Met Ala Val Cys Lys Ala Met
50 55

<210> 24
<211> 58
<212> PRT
<213> Unknown

<220>
<223> Kunitz-like domain of aprotinin.

<400> 24

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
1 5 10 15

Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Rebuttal
Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 25
<211> 51
<212> PRT
<213> Unknown

Q5
<220>
<223> Kunitz-like domain of inter-alpha-trypsin inhibitor precursor.

<400> 25

Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys Met Gly Met Thr Ser Arg
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Ser Met Ala Cys Glu Thr Phe Gln Tyr Gly
20 25 30

Gly Cys Met Gly Asn Gly Asn Asn Phe Val Thr Glu Lys Glu Cys Leu
35 40 45

Gln Thr Cys
50

Part B

<210> 26
<211> 57
<212> PRT
<213> Unknown

<220>
<223> Kunitz-like domain of inter-alpha-trypsin inhibitor precursor.

<400> 26

Val Ala Ala Cys Asn Leu Pro Ile Val Arg Gly Pro Cys Arg Ala Phe
1 5 10 15

Ile Gln Leu Trp Ala Phe Asp Ala Val Lys Gly Lys Cys Val Leu Phe
20 25 30

Pro Tyr Gly Gly Cys Gln Gly Asn Gly Asn Lys Phe Tyr Ser Glu Lys
35 40 45

Glu Cys Arg Glu Tyr Cys Gly Val Pro
50 55

<210> 27
<211> 57
<212> PRT
<213> Unknown

<220>
<223> Kunitz-like domain of amyloid precursor protein.

<400> 27

Glu Val Cys Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met
1 5 10 15

A5
Cont
Ile Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe
20 25 30

Phe Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu
35 40 45

Tyr Cys Met Ala Val Cys Gly Ser Ala
50 55

<210> 28
<211> 51
<212> PRT

Part B

<213> Unknown

<220>

<223> Kunitz-like domain of collagen alpha-3(VI) precursor.

<400> 28

Cys Lys Leu Pro Lys Asp Glu Gly Thr Cys Arg Asp Phe Ile Leu Lys
1 5 10 15

Trp Tyr Tyr Asp Pro Asn Thr Lys Ser Cys Ala Arg Phe Trp Tyr Gly
20 25 30

Gly Cys Gly Gly Asn Glu Asn Lys Phe Gly Ser Gln Lys Glu Cys Glu
35 40 45

Lys Val Cys
50

<210> 29

<211> 57

<212> PRT

<213> Unknown

<220>

<223> Kunitz-like domain of HKI-B9.

<400> 29

Pro Asn Val Cys Ala Phe Pro Met Glu Lys Gly Pro Cys Gln Thr Tyr
1 5 10 15

Met Thr Arg Trp Phe Phe Asn Phe Glu Thr Gly Glu Cys Glu Leu Phe
20 25 30

a5
Cont

Ala Tyr Gly Gly Cys Gly Gly Asn Ser Asn Asn Phe Leu Arg Lys Glu
35 40 45

Lys Cys Glu Lys Phe Cys Lys Phe Thr
50 55

<210> 30

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> 5' sense oligonucleotide used in Example 6.

Sub B

<400> 30
gccaaagcttg gataaaaagat atgaagaata ctgcaccgccc aacgca 46

<210> 31
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> 3' antisense oligonucleotide used in Example 6.

<400> 31
ggggatcctc actgctggcg gaagcagcgg agcat 35

<210> 32
<211> 206
<212> DNA
<213> Artificial Sequence

<220>
<223> Cloned bikunin cDNA fragment in Example 6.

<400> 32
ccaagcttgg ataaaaagata tgaagaatac tgcaccgcca acgcagtcac tgggccttgc 60
cgtgcacatcct tcccacgctg gtactttgac gtggagagga actcctgcaa taacttcatc 120
tatggaggct gccggggcaa taagaacagc taccgctctg aggaggcctg catgctccgc 180
tgcttccgccc agcagtgagg atcccc 206

A5
Cont
<210> 33
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> 3' PCR primer used to amplify EST R74593.

<400> 33
cgaagcttca tctccgaagc tccagacg 28

<210> 34
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' PCR primer used to amplify EST R74593.

<400> 34
aggatctaga caataattac ctgaccaagg a 31

Part B

<210> 35	
<211> 37	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> 5' PCR primer used to amplify EST R35464.	
<400> 35	
ggtctagagg ccgggtccgt ttctcgccctg gctggga	37
<210> 36	
<211> 19	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> 5' PCR primer used to amplify EST R34808.	
<400> 36	
cacctgatcg cgagacccc	19
<210> 37	
<211> 19	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Vector specific DNA sequencing primer (SP6).	
<400> 37	
gat taggtg acactata	19
<i>a5</i>	
<i>cont</i>	
<210> 38	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Vector specific DNA sequencing primer (T7).	
<400> 38	
taatacgact cactata	20
<210> 39	
<211> 22	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Gene specific DNA sequencing primer.	

Ex 5

Cont

<400> 39	ttacctgacc aaggaggagt gc	22
<210> 40		
<211> 23		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Gene specific DNA sequencing primer.		
<400> 40	aatccgctgc attcctgctg gtg	23
<210> 41		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Gene specific DNA sequencing primer.		
<400> 41	cagtcactgg gccttgcgt	20
<210> 42		
<211> 105		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> 5' sense oligonucleotide used in Example 5.		
<400> 42	gaaggggtaa gcttggataa aagatatgaa gaatactgca cgcggcaacgc agtcaactggg	60
	ccttgcgtg catccttccc acgctggtag tttgacgtgg agagg	105
<210> 43		
<211> 129		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> 3' antisense oligonucleotide used in Example 5.		
<400> 43	cgccgatccc tactggcgga agcagcggag catgcaggcc tcctcagagc ggttagctgtt	60
	cttattgccc cggcagcctc catagatgaa gttattgcag gagttcctct ccacgtcaaa	120
	gtaccagcg	129

<210> 44
<211> 207
<212> DNA
<213> Artificial Sequence

<220>
<223> Cloned bikunin fragment in Example 5.

<400> 44
gaaggggataa gcttggataa aagatataa gaataactgca ccgcacacgc agtcactggg 60
ccttgcgtg catccttccc acgctggta tttgacgtgg agaggaactc ctgcaataac 120
ttcatctatg gaggctgccg gggcaataag aacagctacc gctctgagga ggcctgcattg 180
ctccgctgct tccgcccagta gggatcc 207

<210> 45
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<223> EST derived consensus sequence of human Bikunin (Figs. 4D and 4G).

Bikunin
<220>
<221> SIGNAL
<222> (1)..(23)
<223>

<400> 45

Met Leu Arg Ala Glu Ala Asp Gly Val Ser Arg Leu Leu Gly Ser Leu
1 5 10 15

Q5
Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp
20 25 30

Cont'
Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro
35 40 45

Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr
50 55 60

Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys
65 70 75 80

Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala
85 90 95

Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg
100 105 110

Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr
115 120 125

Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg
130 135 140

Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly
145 150 155 160

Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met
165 170 175

Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser
180 185 190

Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe
195 200 205

Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln
210 215 220

Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln
225 230 235 240

Leu Val Lys Asn Thr Tyr Val Leu
245

*as
Cont*
<210> 46
<211> 782
<212> DNA
<213> Homo sapiens

<220>
<221> exon
<222> (61)...(780)
<223>

<400> 46
acctgatcgc gagaccccaa cggctggtgg cgtcgccctgc gcgctctggc tgagctggcc 60
atg gcg cag ctg tgc ggg ctg agg cgg agc cgg gcg ttt ctc gcc ctg 108

Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
 1 5 10 15

ctg gga tcg ctg ctc tct ggg gtc ctg gcg gcc gac cga gaa cgc 156
 Leu Gly Ser Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
 20 25 30

agc atc cac gac ttc tgc ctg gtg tcg aag gtg gtg ggc aga tgc cgg 204
 Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
 35 40 45

gcc tcc atg cct agg tgg tgg tac aat gtc act gac gga tcc tgc cag 252
 Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
 50 55 60

ctg ttt gtg tat ggg ggc tgt gac gga aac agc aat aat tac ctg acc 300
 Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
 65 70 75 80

aag gag gag tgc ctc aag aaa tgt gcc act gtc aca gag aat gcc acg 348
 Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
 85 90 95

67
 ggt gac ctg gcc acc agc agg aat gca gcg gat tcc tct gtc cca agt 396
 Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
 100 105 110

gct ccc aga agg cag gat tct gaa gac cac tcc agc gat atg ttc aac 444
 Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
 115 120 125

05
 tat gaa gaa tac tgc acc gcc aac gca gtc act ggg cct tgc cgt gca 492
 Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
 130 135 140

tcc ttc cca cgc tgg tac ttt gac gtg gag agg aac tcc tgc aat aac 540
 Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
 145 150 155 160

05
 ttc atc tat gga ggc tgc cgg ggc aat aag aac agc tac cgc tct gag 588
 Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
 165 170 175

gag gcc tgc atg ctc cgc tgc ttc cgc cag cag gag aat cct ccc ctg 636
 Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
 180 185 190

ccc ctt ggc tca aag gtg gtg gtt ctg gcg ggg ctg ttc gtg atg gtg 684
 Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val
 195 200 205

ttg atc ctc ttc ctg gga gcc tcc atg gtc tac ctg atc cgg gtg gca 732
 Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
 210 215 220

cgg agg aac cag gag cgt gcc ctg cgc acc gtc tgg agc ttc gga gat 780
 Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp

225

230

235

240

ga

782

<210> 47
<211> 240
<212> PRT
<213> Homo sapiens

<220>
<221> SIGNAL
<222> (1)..(27)
<223>

<400> 47

Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
1 5 10 15

Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
20 25 30

Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
35 40 45

Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
50 55 60

Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
65 70 75 80

Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
85 90 95

Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
100 105 110

Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
115 120 125

Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
130 135 140

Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
145 150 155 160

Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
165 170 175

Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
180 185 190

Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val
195 200 205

Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
210 215 220

Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp
225 230 235 240

but b
<210> 48
<211> 1544
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1358)..(1358)
<223> "n" is any nucleotide.

<220>
<221> exon
<222> (301)..(1056)
<223>

*as
Cont.*
<400> 48
gcacgagttg ggaggtgttag cgccgcctcg aacgcgctga gggccgttga gtgtcgcagg 60
cggcgagggc gcgagtgagg agcagacccca ggcatcgccg gccgagaagg ccgggcgtcc 120
ccacactgaa ggtccggaaa ggcgacttcc gggggctttg gcacctggcg gaccctcccg 180
gagcgctggc acctgaacgc gaggcgctcc attgcgcgtg cgcggtgagg ggcttcccgc 240
acctgatcgc gagacccaa cggctggtgg cgtcgccctgc gcgtctcggc tgagctggcc 300
atg gcg cag ctg tgc ggg ctg agg cgg agc cgg gcg ttt ctc gcc ctg 348
Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
1 5 10 15
ctg gga tcg ctg ctc ctc tct ggg gtc ctg gcg gcc gac cga gaa cgc 396
Leu Gly Ser Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
20 25 30

agc atc cac gac ttc tgc ctg gtg tcg aag gtg gtc ggc aga tgc cgg 444
 Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
 35 40 45

 gcc tcc atg cct agg tgg tgg tac aat gtc act gac gga tcc tgc cag 492
 Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
 50 55 60

 ctg ttt gtg tat ggg ggc tgt gac gga aac agc aat aat tac ctg acc 540
 Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
 65 70 75 80

 aag gag gag tgc ctc aag aac tgt gcc act gtc aca gag aat gcc acg 588
 Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
 85 90 95

 ggt gac ctg gcc acc agc agg aat gca gcg gat tcc tct gtc cca agt 636
 Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
 100 105 110

 gct ccc aga agg cag gat tct gaa gac cac tcc agc gat atg ttc aac 684
 Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
 115 120 125

BB
 tat gaa gaa tac tgc acc gca aac gca gtc act ggg cct tgc cgt gca 732
 Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
 130 135 140

 tcc ttc cca cgc tgg tac ttt gac gtg gag agg aac tcc tgc aat aac 780
 Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
 145 150 155 160

 ttc atc tat gga ggc tgc cgg ggc aat aag aac agc tac cgc tct gag 828
 Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
 165 170 175

AB
 gag gcc tgc atg ctc cgc tgc ttc cgc cag cag gag aat cct ccc ctg 876
 Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
 180 185 190

 ccc ctt ggc tca aag gtg gtg gtt ctg gcg ggg ctg ttc gtg atg gtg 924
 Pro Leu Gly Ser Lys Val Val Leu Ala Gly Leu Phe Val Met Val
 195 200 205

 ttg atc ctc ttc ctg gga gcc tcc atg gtc tac ctg atc cgg gtg gca 972
 Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
 210 215 220

 cgg agg aac cag gag cgt gcc ctg cgc acc gtc tgg agc tcc gga gat 1020
 Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp
 225 230 235 240

 gac aag gag cag ctg gtg aag aac aca tat gtc ctg tgaccgcct 1066
 Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val Leu
 245 250

 gtcgccaaga ggactgggaa agggagggaa gactatgtgt gagttttt taaatagagg 1126

gattgactcg gatttgagtg atcattaggg ctgaggtctg tttctctggg aggtaggacg 1186
 gctgcttcct ggtctggcag ggtatgggaaa gctttggaaa tcctcttagga ggctccctcct 1246
 cgcattggcct gcagtcgtgc agcagccccg agttgttcc tcgctgatcg atttcttcc 1306
 tccaggtaga gttttcttg ctatgttga attccattgc ctcctttct cnatcacaga 1366
 agtgatgttgc gaatcggttc ttttgggttgc ctgatttgc gttttttaa gtataaaca 1426
 aagttttta ttagcattct gaaagaagga aagtaaaatg tacaagtttata aaaaaaagg 1486
 gccttccctt tttagaataaa ttccagcat gttgcttca aaaaaaaaaa aaaaaaaaa 1544

Part B
 <210> 49
 <211> 252
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> (1)...(27)
 <223>

<400> 49

Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
 1 5 10 15

as
 Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg
 20 25 30

amt
 Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
 35 40 45

Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
 50 55 60

Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
 65 70 75 80

Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
 85 90 95

Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
 100 105 110

Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
115 120 125

Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
130 135 140

Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
145 150 155 160

Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
165 170 175

Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
180 185 190

Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val
195 200 205

Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
210 215 220

Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp
225 230 235 240

Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val Leu
245 250

AS
CM
<210> 50
<211> 146
<212> PRT
<213> Homo sapiens

<400> 50

Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg
1 5 10 15

Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly
20 25 30

Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu
35 40 45

Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr
50 55 60

Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln
65 70 75 80

Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys
85 90 95

Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp
100 105 110

Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly
115 120 125

Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu
130 135 140

Arg Cys
145

but b6
<210> 51
<211> 1530
<212> DNA
<213> Artificial Sequence

05
cont
<220>
<223> Consensus bikunin sequence of Fig. 4C.

<220>
<221> misc_feature
<222> (46)..(46)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (117)..(117)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (313)..(313)
<223> "n" is any nucleotide.

<400> 51
gcgacacctccg cgcgttggga ggtgttagcgc ggctctgaac gcgtgnaggg ccgtttagtg 60
tcgcaggcgg cgagggcgcg agtgaggaggc agaccaggc atcgcgccg gagaagnccg 120

gcgtccccac actgaaggc cggaaaggcg acttccgggg gctttggcac ctggcggacc 180
 ctcccgagc gtcggcacct gaacgcgagg cgctccattg cgctgcgtt tgagggcct 240
 cccgcacctg atcgcgagac cccaacggct ggtggcgtcg ctgcgcgtct cggctgagct 300
 ggccatggcg cantgttgcg ggdtgaggcg gacggcgaaa ctcgcctgct gggatcgctg 360
 ctccctctg gggtcctggc gggcgaccga gaacgcagca tccacgactt ctgcctggc 420
 tcgaaggtgg tggcagatg cggggcctcc atgcctaggt ggtggtacaa tgtcactgac 480
 ggatcctgcc agctgtttgt gtatggggc tggacggaa acagcaataa ttacctgacc 540
 aaggaggagt gcctcaagaa atgtgccact gtcacagaga atgccacggg tgacctggcc 600
 accagcagga atgcagcggc ttccctctgct ccaagtgctc ccagaaggca ggattctgaa 660
 gaccactcca gcgatatgtt caactatgaa gaatactgca cggccaaacgc agtcaactggg 720
 ctttgcgtg catccttccc acgctggta tttgacgtgg agaggaactc ctgcaataac 780
 ttcatctatg gaggctgccg gggcaataag aacagctacc gctctgagga ggcctgcatt 840
 ctccgctgct tccgcccagca ggagaatcct cccctgcccc ttggctcaaa ggtggtggtt 900
 ctggcggggc tggtcgat ggtgttgatc ctccctctgg gggctccat ggtctacctg 960
 atccgggtgg cacggaggaa ccaggagcgt gcccgcgca ccgtctggag ctccggagat 1020
 gacaaggagc agctggtaa gaacacatat gtcctgtgac cggccctgtcg ccaagaggac 1080
 tggggaaaggg aggggagact atgtgtgagc tttttttaaa tagagggatt gactcgatt 1140
 tgagtgtatca ttagggctga ggtgtgtttc tctggaggt aggacggctg cttcctggc 1200
 tggcagggat gggtttgctt tgaaatcct ctagggatc ctcctcgca tggcctgcag 1260
 tctggcagca gccccgagtt gtttctcgc tgatcgatt ctttcctcca ggttagagtt 1320
 tctttgttta tggtgaattc cattgcctct tttctcatca cagaagtgtatc gttggaaatcg 1380
 tttctttgtt tggtctgatt tatggtttt ttaagtataa acaaaagttt tttattagca 1440
 ttctgaaaga aggaaagtaa aatgtacaag ttataaaaaa aggggccttc cccttagaa 1500
 taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1530

<210> 52
 <211> 170
 <212> PRT
 <213> Homo sapiens
 <400> 52

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val

1

5

10

15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys
165 170

<210> 53

<211> 27

<212> PRT

<213> Homo sapiens

<400> 53

Met Ala Gln Leu Cys Gly Leu Arg Arg Ser Arg Ala Phe Leu Ala Leu
1 5 10 15

Leu Gly Ser Leu Leu Ser Gly Val Leu Ala
20 25

Artificial Sequence

```
<210> 54
<211> 23
<212> PRT
<213> Homo sapiens
<400> 54
```

Met Leu Arg Ala Glu Ala Asp Gly Val Ser Arg Leu Leu Gly Ser Leu
1 5 10 15

Leu Leu Ser Gly Val Leu Ala
20

Artificial Sequence

```
<210> 55
<211> 102
<212> DNA
<213> Artificial Sequence
```

Artificial Sequence

```
<220>
<223> 5' sense oligonucleotide used for construct #2 in Example 5.
```

Artificial Sequence

```
<400> 55
gaaggggtaa gcttggataa aagagaagaa tactgtactg ctaatgctgt tactggtcca 60
tgttagagctt cttttccaag atggtaactt gatgtgaaa ga 102
```

Artificial Sequence

```
<210> 56
<211> 129
<212> DNA
<213> Artificial Sequence
```

Artificial Sequence

```
<220>
<223> 3' antisense oligonucleotide used for construct #2 in Example 5.
```

Artificial Sequence

```
<400> 56
actggatcct cattggcgaa aacatctcaa catacaggct tcttcagatc tgtaagaatt 60
tttattacct ctacaaccac cgtaaataaa attattacaa gaatttcttt caacatcaa 120
gtaccatct 129
```

Artificial Sequence

```
<210> 57
<211> 108
<212> DNA
<213> Artificial Sequence
```

Artificial Sequence

```
<220>
<223> 5' sense oligonucleotide used for construct #3 in Example 5.
```

Artificial Sequence

```
<400> 57
gaaggggtaa gcttggataa aagaaattac gaagaatact gtactgctaa tgctgtact 60
```

ggtccatgta gagcttc tccaaatgg tactttgatg ttgaaaga 108

<210> 58
<211> 117
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' sense oligonucleotide used for construct #4 in Example 5.

<400> 58
gaagggttaa gcttgataa aagagatag tttaattacg aagaatactg tactgctaat 60
gctgttactg gtccatgtag agcttc tttt ccaagatggt actttgatgt tgaaaga 117

<210> 59
<211> 19
<212> DNA
<213> Artificial Sequence

Reb 867
<220>
<223> Sense oligonucleotide used in PCR in Example 8.

<400> 59
cacctgatcg cgagacccc 19

<210> 60
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense oligonucleotide used in PCR in Example 8.

*A5
Cont*
<400> 60
ctggcggaaag cagcggagca tgc 23

<210> 61
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide used in in vitro mutagenesis in Example 9.

<400> 61
cgctgttcgg ctgacctggc cctgcagatg ggcacgtgt gggg 45

<210> 62
<211> 60
<212> DNA
<213> Artificial Sequence

<220>

<223> Oligonucleotide used in in vitro mutagenesis in Example 9.

<400> 62

ctgcccccttg gctcaaagta ggaagatctt cccccccgggg gggtggttct ggcggggctg 60

<210> 63

<211> 14

<212> PRT

<213> Homo sapiens

<400> 63

Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Pro Leu Gly
1 5 10

<210> 64

<211> 20

<212> PRT

<213> Homo sapiens

<400> 64

Part B
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys

20

<210> 65

<211> 20

<212> PRT

<213> Homo sapiens

<400> 65

Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys
1 5 10 15

Arg Ala Ser Phe

20

<210> 66

<211> 11

<212> PRT

<213> Homo sapiens

<400> 66

Pro Arg Tyr Val Asp Gly Ser Gln Phe Tyr Gly

1

5

10

<210> 67
<211> 55
<212> PRT
<213> Homo sapiens

<400> 67

Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
1 5 10 15

Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
20 25 30

Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
35 40 45

Val Lys Asn Thr Tyr Val Leu
50 55

Subtotal
<210> 68
<211> 43
<212> PRT
<213> Homo sapiens

<400> 68

Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
1 5 10 15

Cont.
Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
20 25 30

Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp
35 40

<210> 69
<211> 55
<212> PRT
<213> Homo sapiens

<400> 69

Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
1 5 10 15

Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu

20

25

30

Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
 35 40 45

Val Lys Asn Thr Tyr Val Leu
 50 55

<210> 70
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 70

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
 1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
 20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
 35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
 50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
 100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn
 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr
180 185 190

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val
195 200 205

Trp Ser Phe Gly Asp
210

<210> 71
<211> 225
<212> PRT
<213> Homo sapiens

<400> 71

Part B
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
35 40 45

A5
Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 55 60

Cont
Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp
65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser
85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn

130 135 140
Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln
145 150 155 160
Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175
Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr
180 185 190
Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val
195 200 205
Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val
210 215 220

Leu
225

Part B
<210> 72
<211> 19
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> "Xaa" is Ile, Thr, Asn, or Ser.

A5
Cont'
<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> "Xaa" is Val, Ala, Glu, or Gly.

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> "Xaa" is Ser, Pro, Thr, or Ala.

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> "Xaa" is Tyr, His, Asn, or Asp.

<400> 72

Arg Pro Leu Gln Arg Tyr Val Ser Xaa Ile Xaa Arg Ile Ile Ala Pro
1 5 10 15

Xaa Thr Xaa

<210> 73
<211> 108
<212> PRT
<213> Homo sapiens

<400> 73

Pro Gly His Gln Gln Glu Cys Ser Gly Phe Leu Cys Pro Lys Ser Pro
1 5 10 15

Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu
20 25 30

Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe
35 40 45

Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile
50 55 60

Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala
65 70 75 80

Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu Pro Leu
85 90 95

Gly Ser Lys Val Val Val Leu Ala Gly Ala Val Ser
100 105

105
Cont.
<210> 74
<211> 31
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (25)..(25)
<223> "Xaa" is Asp or Glu.

<400> 74

Ser Phe Ser Trp Gly Ala Ser Met Val Leu Leu Ile Pro Gly Gly Lys
1 5 10 15

Glu Glu Pro Gly Ala Cys Pro Ala Xaa Arg Leu Glu Leu Arg Arg
20 25 30

Handwritten B6
<210> 75
<211> 511
<212> DNA
<213> Artificial Sequence

<220>
<223> Corrected version of EST R74593 (see Fig. 3 and page 28).

<220>
<221> misc_feature
<222> (425)..(425)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (482)..(482)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (510)..(510)
<223> "n" is any nucleotide.

*05
Cont*
<400> 75
gcaataatta cctgaccaag gaggagtgcc tcaagaaatg tgccactgtc acagagaatg 60
ccacgggtga cctggccacc agcaggaatg cagcggattc ctctgtccca agtgcctcca 120
gaaggcagga ttctgaagac cactccagcg atatgttcaa ctatgaagaa tactgcaccg 180
ccaaacgcagt cactgggcct tgccgtgcat ccttcccacg ctggtaactt gacgtggaga 240
ggaactcctg caataacttc atctatggag gctgccgggg caataagaac agctaccgct 300
ctgaggaggc ctgcatgctc cgctgcttcc gccagcagga gaatcctccc ctgccccttg 360
gctcaaaggt ggtggttctg gccggggctg tttcgtgatg gtgttgcattt ttttcctggg 420
gagcntccat ggtcttactg attccgggtg gcaaggagga accaggagcg tgccctgcgg 480
ancgtctgga gcttcggaga tgacaagggn t 511

<210> 76
<211> 31
<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acids 184-214 of translation of consensus sequence in Fig. 3.

<220>

<221> MISC_FEATURE

<222> (25)..(25)

<223> "Xaa" is Asp or Glu.

<400> 76

Ser Phe Ser Trp Gly Ala Ser Met Val Leu Leu Ile Pro Gly Gly Lys
1 5 10 15

Glu Glu Pro Gly Ala Cys Pro Ala Xaa Arg Leu Glu Leu Arg Arg
20 25 30

<210> 77

<211> 312

<212> DNA

<213> Homo sapiens

Sub B
<220>

<221> misc_feature

<222> (45)..(45)

<223> "n" is any nucleotide.

<220>

<221> misc_feature

<222> (49)..(49)

<223> "n" is any nucleotide.

Q2

Cont

<220>

<221> misc_feature

<222> (118)..(118)

<223> "n" is any nucleotide.

<220>

<221> misc_feature

<222> (231)..(231)

<223> "n" is any nucleotide.

<220>

<221> misc_feature

<222> (305)..(305)

<223> "n" is any nucleotide.

<400> 77

gcgacacctcg cgcggtggga ggtgtagcgc ggctctgaac gcgtngagng gccgttgagt 60
gtcgcaggcg gcgagggcgc gagtgaggag cagaccagg catcgccgc cgagaagnncg 120
ggcgccccca cactgaaggt cggaaaggc gactccggg ggcttggca cctggcggac 180
cctccggag cgtcggcacc tgaacgcgag gcgctccatt gcgcgtgcgt ntgaggggct 240
tcccgacact gatcgcgaga ccccaacggc tggtgccgtc gcctgcgcgt ctcggctgag 300
ctggncatgt cg 312

Part B
<210> 78
<211> 330
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (117)..(117)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (123)..(123)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (321)..(321)
<223> "n" is any nucleotide.

Part C
<400> 78
gcgacacctcg cgcggtggga ggtgtagcgc ggctctgaac gcgtgcaggg ccgttgagt 60
tcgcaggcgg cgagggcgcg agtgaggagc agaccaggc atcgccgcgc gagaagnncgg 120
gcntccccac actgaaggtc cggaaaggcg acttccgggg gcttggcac ctggcggacc 180
ctcccgagc gtggcacctg aacgcgaggc gctccattgc gcgtgcgttt gaggggcttc 240
ccgcacactga tcgcgagacc ccaacggctg gtggcgtcgc ctgcgcgtct cggctgagct 300
ggccatggcg cactgtgcgg ngctgaggcgc 330

<210> 79
<211> 283
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> (9)..(9)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (11)..(11)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (222)..(222)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (231)..(231)
<223> "n" is any nucleotide.

but then
<220>
<221> misc_feature
<222> (262)..(262)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (267)..(274)
<223> "n" is any nucleotide.

<400> 79
ttgagtgtng naggcggcga gggcgcgagt gaggagcaga cccaggcata gcgcgcggag 60
aaggccgggc gtccccacac tgaagggtccg gaaaggcgac ttccgggggc tttggcacct 120
ggcggaccct cccggagcgt cgccacctga acgcgaggcg ctccattgcg cgtgcgtttg 180
aggggcttcc cgcacctgat cgcgagaccc caacggctgg tngcgtcgct ncgcgtctcg 240
gctgagcttg gccatggcgc antgttncgg gctnaggcgg acg 283

A5
AM
<210> 80
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (44)..(44)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (46)..(46)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (76)..(76)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (114)..(114)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (187)..(187)
<223> "n" is any nucleotide.

part B ↗
<220>
<221> misc_feature
<222> (268)..(268)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (309)..(309)
<223> "n" is any nucleotide.

part C ↗
<220>
<221> misc_feature
<222> (317)..(317)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (332)..(332)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (370)..(370)
<223> "n" is any nucleotide.

<400> 80
ggcgacacctcc ggcgcgttggg aggtgttagcc cgctctgaac gggnangggc cgttgagtgt 60

cgcaggcggc agggcngact gaggagcaga cccaggcatc gcgccggag aagnccggcg 120
tccccacact gaagggtccgg aaaggcgact tccggggct ttggcacctg gcggacgtcc 180
cgagcnggc acctgaacgc gaggcgctcc attgcgcgtg cgtttgggg gcttccgca 240
cctgatcgcg agaccccaad ggctggtncc gtcgctggcg cgttctcggc tgagctggcc 300
atggcgcant gttgcgngct gaggcggacc gncgttttc ttgccttgc tgggattcgc 360
ttgcttcctn tctgggggtt cctggcggc cgaccgagaa cgcagcatcc aagaatttt 420
gcc 423

Part B6
<210> 81
<211> 344
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (35)..(35)
<223> "n" is any nucleotide.

Part B6
<220>
<221> misc_feature
<222> (148)..(148)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (235)..(235)
<223> "n" is any nucleotide.

Part C
<220>
<221> misc_feature
<222> (261)..(261)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (272)..(272)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (293)..(293)
<223> "n" is any nucleotide.

<220>

<221> misc_feature
<222> (300)..(300)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (313)..(313)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (320)..(320)
<223> "n" is any nucleotide.

<400> 81
ggaggagcag acccaggcat cgdcgcgcga gaagnccggc gtcccccacac tgaaggtccg 60
gaaaggcgac ttccgggggc ttggcacct ggcggaccct cccggagcgt cggcacctga 120
acgcgaggcg ctccattgcg cgtgcgtntg gaggggcttc ccgcacctga tcgcgagacc 180
ccaacggctg gtgggcgtcg ctgcgcgtct tcggctgagc tggccatgg cgcanntg 240
gcgggctgag gcggacgcgg ncgttttttc gnccttgctg ggattcgttg ttnctctcn 300
ggggttctgg ggnggcccgan cgagaacgca agcattcacg attt 344

Rehby

<210> 82
<211> 253
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (56)..(56)
<223> "n" is any nucleotide.

*AS
cont*

<220>
<221> misc_feature
<222> (137)..(137)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (145)..(145)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (159)..(159)

Sub Bl

<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (233)..(233)
<223> "n" is any nucleotide.

<400> 82
ggaccctccc ggagcgctcg cacctgaacg cgaggcctcc attgcgggtgc gtgtgnaggg 60
gcttcccgca cctgatcgcg agaccccaac ggctggtggc gtcgctgcgc gtctcggctg 120
agctggccat ggccgcantgt tgccngctga ggcggcggnc gtttctcgc ctgctggat 180
cgctgctcct ctctgggtc ctggcggccg accgagaacg cagcatccac ganttcttcc 240
tggtgttcga agg 253

<210> 83
<211> 419
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (20)..(20)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (26)..(26)
<223> "n" is any nucleotide.

a5
cont
<220>
<221> misc_feature
<222> (95)..(95)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (292)..(292)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (313)..(315)
<223> "n" is any nucleotide.

<400> 83

ttagcgccgc tctgaacgcn agaagnggcc gttgagtgtc gcaggcggcg agggcgcgag	60
tgaggagcag acccaggcat cgccgcggca gaagncgggc gtcacac tgaaggtccg	120
gaaaggcgac ttccgggggc tttggcacct ggcggaccct cccggagcgt cggcacctga	180
acgcgaggcg ctccattgcg cgtgcgtttg aggggcttcc cgacactgat cgcgagaccc	240
caacggctgg tggcgtcgcc tgccgtctc ggctgagctg gccatggcgc antggtcgg	300
gcttggcg gannngccgt ttctcgccctg ctgggatcgc tgctcctctc tgggtcctg	360
gcggccgacc gagaacgcag catccacgac ttctgcctgg tgtcgaaggt ggtggcag	419

Rebby

<210> 84
<211> 477
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (27)..(27)
<223> "n" is any nucleotide.

as
amt

<220>
<221> misc_feature
<222> (139)..(139)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (223)..(223)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (232)..(232)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (302)..(302)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (310)..(310)
<223> "n" is any nucleotide.

<220>

list B

```
<221> misc_feature
<222> (322)..(322)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (328)..(328)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (357)..(357)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (375)..(375)
<223> "n" is any nucleotide.
```

list B

```
<220>
<221> misc_feature
<222> (392)..(392)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (398)..(398)
<223> "n" is any nucleotide.
```

list A

```
<220>
<221> misc_feature
<222> (405)..(405)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (427)..(427)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (437)..(437)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (449)..(449)
<223> "n" is any nucleotide.
```

full B67

```
<220>
<221> misc_feature
<222> (458)..(458)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (474)..(474)
<223> "n" is any nucleotide.
```

part B67

<400> 84		
agacccaggc atcgcgcc gagaagncgg gcgtccccac actgaaggc	60	cgaaaggcg
acttccgggg gctttggcac ctggcgacc ctccggagc gtcggcacct	120	gaacgcgagg
cctccattgc cgtgcgttng aggggcttcc cggaaacttga tcgcgagacc	180	ccaaacggctg
gtggcgctgc tgcgcgtcct cggctgagct ggccatggcg cantggtgc	240	gncgtgaggc
cgaggggccg gtttctgcc ttgctggat cgctgctcct ctctgggtc ctggcgccg	300	
ancgaagaan gcagcaatcc angaattnct gcctgggttt cgaaagttgg tgggcanatt	360	
ccggggcctt catgnctaag gttgggtgg anaatgtcaa ttaangattc ttgcaactgt	420	
ttgtgtnatt gggctntta aacggaaana caataatnac ctgaccaaag aagnaat	477	

part B67

```
<210> 85
<211> 393
<212> DNA
<213> Homo sapiens
```

part B67

```
<220>
<221> misc_feature
<222> (361)..(361)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (367)..(367)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
<222> (384)..(384)
<223> "n" is any nucleotide.
```

```
<220>
<221> misc_feature
```

<222> (390)..(390)
<223> "n" is any nucleotide.

<400> 85
ggccgggtcg tttctcgctt ggctgggatc gctgctcctc tctgggtcc tggccggccg 60
accgagaacg cagcatccac gacttctgcc tggtgtcgaa ggtggtgggc agattccggg 120
cctccatgcc taggtggtgg tacaatgtca ctgacggatc ctgccagctg tttgtgtatg 180
ggggctgtga cgaaacacgc aataattacc tgaccaagga ggagtgcctc aagaaatgtg 240
ccactgtcac agagaatgcc acgggtgacc tggccaccag caggaatgca gcggattcct 300
ctgtcccaag tgctcccaaga aggaggatt cttgaagacc acttcagcga tatgtttcaa 360
ntattgnaag aataattgca ccgncaacgn att 393

Human
<210> 86
<211> 428
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (3)..(3)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (11)..(12)
<223> "n" is any nucleotide.

A5
Cont
<220>
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<222> (17)..(17)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (48)..(48)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (425)..(425)
<223> "n" is any nucleotide.

<400> 86
gcngcgcgtt nntcgcntgc tgggatcgct gcacctctct ggggtcgngg cggccgaccg 60

agaacgcagc atccacgact tctgcctggc gtcgaagggtg gtgggcagat gccgggcctc 120
catgcctagg tgggtggtaca atgtcactga cggatcctgc cagctgttg tgtatgggg 180
ctgtgacgga aacagcaata attacctgac caaggaggag tgcctcaaga aatgtgccac 240
tgtcacagag aatgccacgg gtgacctggc caccaggagg aatgcagcgg attcctctgt 300
cccaagtgct cccagaaggc aggattctga agaccactcc agcgatatgt tcaactatga 360
agaatactgg caccgccaac gcattcactg ggcctgcgtg catccttccc acgctggcac 420
tttgnncgt 428

Reb Bl
<210> 87
<211> 425
<212> DNA
<213> Homo sapiens

<220>
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<222> (7)..(7)
<223> "n" is any nucleotide

<220>
<221> misc_feature
<222> (403)..(403)
<223> "n" is any nucleotide

Q5
AMT
<220>
<221> misc_feature
<222> (409)..(409)
<223> "n" is any nucleotide.

<400> 87
ctgggantcg ctgctcctct ctggggctc ggcggccgac cgagaacgca gcatccacga 60
cttctgcctg gtgtcgaagg tgggtggcag atgccggcc tccatgccta ggtgggtgt 120
caatgtcact gacggatcct gccagctgtt tgtgtatggg ggctgtgacg gaaacagcaa 180
taattacctg accaaggagg agtgcctcaa gaaatgtgcc actgtcacag agaatgccac 240
gggtgacctg gccaccagca ggaatgcagc ggattcctct gtcccaagtg ctcccagaag 300
gcaggattct gaagaccact ccagcgatat gttcaactat gaagaatact gcaccgccaa 360
cgcagtcact ggggccttgc gtggaatcct ttcccacgct ggnaatttng acgttgagaa 420
ggaac 425

<210> 88
<211> 343
<212> DNA
<213> Homo sapiens

<220>
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<222> (48)..(48)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (62)..(62)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (211)..(211)
<223> "n" is any nucleotide.

sub 6
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<221> misc_feature
<222> (232)..(232)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (245)..(245)
<223> "n" is any nucleotide.

a5
<220>
<221> misc_feature
<222> (309)..(309)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (318)..(318)
<223> "n" is any nucleotide.

<400> 88
gattcggcac aggggaaaca gcaataatta cctgaccaag gaggagtncc tcaagaaatg 60
tnccactgtc acagagaatg ccacgggtga cctggccacc agcaggaatg cagcggattc 120
ctctgtccca agtgctccca gaaggcagga ttctgaagac cactccagcg atatgttcaa 180
ctatgaagaa tactgcacccg ccaacgcagt ncactgggcc ttgcgtggca tnccttccca 240
cgctngtact ttgacgtgga gaggaactcc tggcaataac ttcatctatg gaggcttgcc 300

ggggcaatna agaacagntt accgctctt aggaggcctg cat

343

<210> 89
<211> 510
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (424)..(424)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (481)..(481)
<223> "n" is any nucleotide.

Part B
<220>
<221> misc_feature
<222> (509)..(509)
<223> "n" is any nucleotide.

<400> 89
gcaataatta cctgaccaag gaggagtgcc tcaagaaatg tgccactgtc acagagaatg 60
ccacgggtga cctggccacc agcaggaatg cagcggattc ctctgtccca agtctccag 120
aaggcaggat tctgaagacc actccagcga tatgttcaac tatgaagaat actgcaccgc 180
caacgcagtc actgggcctt gccgtgcate cttccacgc tggtaacttg acgtggagag 240
gaactcctgc aataacttca tctatggagg ctgccccggc aataagaaca gctaccgctc 300
tgaggaggcc tgcatgctcc gctgcttccg ccagcaggag aatcctcccc tgcccttgg 360
ctcaaagggtg gtggttctgg ccggggctgt ttcgtatgg tggatcct tttcctgggg 420
agcntccatg gtcttactga ttccgggtgg caaggaggaa ccaggagcgt gcccgtcgga 480
ncgtctggag ctccggagat gacaagggn 510

Part C
<210> 90
<211> 293
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (257)..(257)
<223> "n" is any nucleotide.

<400> 90
gctaccgctc tgaggaggcc tgcatgctcc gctgcttccg ccagcaggag aatcctcccc 60
tgcccccggg ctcaaagggtg gtgggtctgg cggggctgtt cgtatgggt ttgatcctct 120
tcctggggag cctccatggt ctacctgatc cgggtggcac ggagggacc agggagcgtg 180
ccctgcgcac cgtctggag ctccggagat gacaagggag cagctgggtg aagaacacat 240
atgttcctgt tgaccgnct gtgcgccaag aggattgggg gaagggaggg gga 293

<210> 91
<211> 282
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (19)..(19)
<223> "n" is any nucleotide.

DNA
<220>
<221> misc_feature
<222> (147)..(147)
<223> "n" is any nucleotide.

<400> 91
ttccgccaag cagaaaaant cctcccttcc cccttggctc aaaggtgggt gttcctggcg 60
gggctgttcg tcatgggttt gatcccttcc tcccgggagc ctcccatggt cttaccctga 120
tccgggtggc acggaggaac ccaggancgt gccctgcgcac ccgtctggag ctccggagat 180
gacaaggagc agctggtgaa gaacacatat gtcctgtgac cgccctgtcg ccaagaggac 240
tggggaaaggg aggggagact atgtgtgagc ttttttaaa ta 282

95
<210> 92
<211> 390
<212> DNA
<213> Homo sapiens

<220>
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<222> (33)..(33)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (55)..(55)
<223> "n" is any nucleotide.

,

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<220>
<221> misc_feature
<222> (118)..(118)
<223> "n" is any nucleotide.
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<220>
<221> misc_feature
<222> (213)..(213)
<223> "n" is any nucleotide.
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<220>
<221> misc_feature
<222> (228)..(228)
<223> "n" is any nucleotide.
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BB

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<222> (259)..(259)
<223> "n" is any nucleotide.
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<220>
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<222> (267)..(267)
<223> "n" is any nucleotide.
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05

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<220>
<221> misc_feature
<222> (324)..(324)
<223> "n" is any nucleotide.
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AM

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<220>
<221> misc_feature
<222> (333)..(333)
<223> "n" is any nucleotide.
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<220>
<221> misc_feature
<222> (344)..(344)
<223> "n" is any nucleotide.
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<220>
<221> misc_feature
<222> (387)..(387)
<223> "n" is any nucleotide.
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<400> 92
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gagaggaact cctgcaataa ctccatctat ggnggctgcc ggggaataag aacanctacc 60
gctctgagga ggcctgcgtg ctccgctgct tccgctgtgt gttctttcc aggcacgcag 120
gagaatcctc ccctgcccct tggctcaaag gtgggggttc tggggggct gttctgtatg 180
gtgttgcgtcc tcttcctggg agcctccatg gtntacactga tccgggtngc acggaggaac 240
cagggagcgt gcccgtcgna ccgtctngga gctccggaga tgacaaggag cagctggta 300
agaacacata tgcctgtga ccgnccctgtt cgncaagagg actngggaa aggggagggg 360
agattatgtg ttgagttttt tttaaantag 390

Annotations
<210> 93
<211> 406
<212> DNA
<213> Homo sapiens

<220>
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<222> (306)..(306)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (328)..(328)
<223> "n" is any nucleotide.

Annotations
<220>
<221> misc_feature
<222> (342)..(342)
<223> "n" is any nucleotide.

Annotations
<220>
<221> misc_feature
<222> (365)..(365)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (370)..(370)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (377)..(377)
<223> "n" is any nucleotide.

<220>

<221> misc_feature
<222> (382)..(382)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (402)..(402)
<223> "n" is any nucleotide.

<400> 93
gattcggAAC gaggAGCCGG ggcaataaga acagctaccg ctctgaggag gcctgcatgc 60
tccgctgctt ccGCCAGCAG gagaatcctc ccctgcccct tggctcaaag gtggtggttc 120
tggcggggct gttcgtatg gtgttgatcc tcttcctggg agcctccatg gtctacctga 180
tccgggtggc acggaggaac caggagcgt gccctgcgca ccgtctggga gctccggaga 240
tgacaaggga gcagctggtg aagaacacat atgttctgt tgaccgcctt gttcgccaaag 300
agggantggg ggaaggggag gggaganta ttgttgttga gntttttttt aaaatttagga 360
ggggnttgan ttccggnttt tnagttgatc catttagggg gntgag 406

Bob Bl
as
CMT
<210> 94
<211> 360
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (142)..(142)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (339)..(339)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (347)..(347)
<223> "n" is any nucleotide.

<400> 94

nggccttgca gtgctccgct gcttccggca gcaggagaat cctccctgc ccctggctc 60
aaaggtggtg gttctggcg ggctgttcgt gatgggttg atcctttcc tgggagcctc 120
catggtctac ctgatccggg tngcacggag gaaccaggag cgtccctgc gcaccgtctg 180
gagctccgga gatgacaagg agcagctggt gaagaacaca tatgtcctgt gaccgcctg 240
tcgccaagag gactgggaa gggagggag actatgtgtg agctttttt aaatagaggg 300
attgactcggtt atttgagtga tcattagggc tgaggtctnt ttctctngga ggttaggacga 360

Part B
<210> 95
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (334)..(334)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (368)..(368)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (376)..(376)
<223> "n" is any nucleotide.

Part C
<400> 95
cggggctgtt cgtgatggtg ttgatcctct tcctggagc ctccatggtc tacctgatcc 60
gggtggcacg gaggaaccag gagcgtgccc tgccgcaccgt ctggagctcc ggagatgaca 120
aggagcagct ggtgaagaac acatatgtcc tgtgaccgccc ctgtcgccaa gaggactggg 180
gaaggggaggg gagactatgt gtgagctttt tttaaataga gggattgact cggatttgag 240
tgcatttag ggctgaggc ttgttctcg ggaggttagga cggctgcttc ctgggtcttg 300
gcagggatgg gtttgcttt gggaaatcct ctnggaggc tcctccttcg catgggcctt 360
gcagtctngg cagcancccc cgagttttt tccttcgtg atccgatttc tttcctcca 420
ggtaagaatt tttctttt 438

<210> 96
<211> 448
<212> DNA

<213> Homo sapiens
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 <221> misc_feature
 <222> (108)..(108)
 <223> "n" is any nucleotide.

<220>
 <221> misc_feature
 <222> (261)..(261)
 <223> "n" is any nucleotide.

666
 <400> 96
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 ggtgaagaac acatatgtcc tgtgaccgccc ctgtcgccaa gaggactngg gaagggaggg 120
 gagactatgt gtgagctttt tttaaataga gggattgact cggatttgag tgatcattag 180
 ggctgaggc tgtttctctg ggaggttagga cggctgcttc ctggctggtc agggatgggt 240
 ttgccttggaa atccctcta ngaggctcct cctcgcatgg cctgcagtct ggcagcagcc 300
 ccgagttgtt tcctcgctga tcgatttctt tcctccaggt agagtttctt ttgcttatgt 360
 tgaattccat tgcctttttt ctcatcacag aagtgtatgtt ggaatcggtt cttttgggtt 420
 gtctgattta tgggtttttt ttaagtat 448

AS
 <210> 97
 <211> 331
 <212> DNA
 <213> Homo sapiens
 <220>
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 <222> (20)..(20)
 <223> "n" is any nucleotide.

<220>
 <221> misc_feature
 <222> (30)..(30)
 <223> "n" is any nucleotide.

<400> 97
 attagggctg aggtctgttn ctctgggagn taggacggct gccttcctgg tctggcaggg 60
 atgggtttgc tttggaaatc ctctaggagg ctcctcctcg catggcctgc agttctgcag 120
 cagccccgag ttgtttcctc gctgatcgat ttcttcctc caggttagagt tttcttgct 180
 tatgttgaat tccattgcct cttttctcat cacagaagtg atgttggaat cgtttctttt 240

gtttgtctga tttatggttt tttaagtat aaacaaaagt ttttattag cattctgaaa 300
gaaggaaaagt aaaatgtaca agtttaataaa a 331

100
<210> 98
<211> 373
<212> DNA
<213> Homo sapiens

<220>
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<222> (45)..(45)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (102)..(102)
<223> "n" is any nucleotide.

100
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<221> misc_feature
<222> (105)..(105)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (159)..(159)
<223> "n" is any nucleotide.

100
<220>
<221> misc_feature
<222> (174)..(174)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (213)..(213)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (337)..(337)
<223> "n" is any nucleotide.

<400> 98
gattgactcg gatttgagtg atcatttaggg ctgaggtctg tttcnctggg aggtaggacg 60
gctgctcccc tggctggca gggatgggtt tgctttggaa anccnctagg aggctcctcc 120

tcgcatggcc tgcagtctgg cagcagcccc gagttgttnc ctcgctgatc gatntcttc 180
ccccaggtag agttttcttt gcttatgttg aantccattg cctctttct catcacagaa 240
gtgatgttgg aatcgttct tttgttgtc tgatttatgg ttttttaag tataaaca 300
agtttttat tagcattctg aaagaaggaa agtaaantgt acaagttaa taaaaagggg 360
cctcccccctt taa 373

Part 1b
<210> 99
<211> 380
<212> DNA
<213> Homo sapiens

<400> 99
gattgactcg gatttggagt gatcatagg gctgaggtct gttctctgg gaggtaggac 60
ggctgcttcc tggctggca gggatgggtt tgcttggaa atcctctagg aggctcctcc 120
ttcgcatggc ctgcagtctg gcagcagccc cgagttgtt cctcgctgat cgatttctt 180
cctccaggta gagtttctt tgcttatgtt gaattccatt gcctctttc tcacacaga 240
agtgatgttgc gaatcgtttc tttgtttgt ctgattatg ttttttaa gtataaaca 300
aagttttta ttagcattct gaaagaaggaa aagtaaaatg tacaagtttataaaaaagg 360
gccttcccccctt ttagaataaa 380

As cont
<210> 100
<211> 320
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (304)..(304)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (309)..(309)
<223> "n" is any nucleotide.

<400> 100
tctggcaggatgggtttgc ttggaaatc ctctaggagg ctcctcctcg catggcctgc 60
agtctggcag cagcccgagt tggccctcg ctgatcgatt tcttcctcc aggttagagtt 120
ttctttgctt atgttgaatt ccattgcctc ttttctcatc acagaagtga tgttgaaatc 180

gtttcttttg tttgtctgat ttatggttt tttaagtata aacaaaagtt ttttattagc 240
attctgaaag aaggaaagta aaatgtacaa gtttaataaa aaggggcctt cccctttagg 300
aatnaaaaana aaaaagggtg 320

101
<210> 101
<211> 397
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (24)..(24)
<223> "n" is any nucleotide.

101
<400> 101
gattgactcg gatttgagtg atcnatttagg gctgaggtct gtttctctgg gaggtaggac 60
ggctgcttca tggctggca gggatgggtt tgcttggaa atcctctagg aggctcctcc 120
tcgcattggcc tgcagctgc agcagccccg agttgttcc tcgctgatcg atttcttcc 180
tccaggtaga gtttcttg ctatgttga attccattgc ctctttctc atcacagaag 240
tgatgttggaa atcgttctt ttgttgtct gattatgtt tttttaagt ataaacaaaa 300
gtttttatt agcattctga aagaaggaaa gtaaaatgta caagttaat aaaaaggccc 360
cttcccttt agaataaatt tcagcatgtg cttcaa 397

102
<210> 102
<211> 289
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (61)..(61)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (74)..(74)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (122)..(122)
<223> "n" is any nucleotide.

Det. 667

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<220>
<221> misc_feature
<222> (184)..(184)
<223> "n" is any nucleotide.
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<400> 102
gaggctcctc ctcgcattggc ctgcagtctt ggcagcagcc ccgagttgtt tcctcgctga 60
ncgatttctt tccnccaggt agagtttctt ttgcttatgt tgaattccat tgcctcttt 120
cncatcacag aagtgtatgtt ggaatcggtt cttttgtttg tctgatttat ggttttttta 180
agtntaaaca aaagttttttt attagcattc tgaaaagaagg aaagtaaaat gtacaagttt 240
aataaaaaagg ggcctttcccc tttagaataa aaaaaaaaaa aaaaaaaaaa 289
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<210> 103
<211> 311
<212> DNA
<213> Homo sapiens
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05
cont

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<220>
<221> misc_feature
<222> (7)..(7)
<223> "n" is any nucleotide.
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<400> 103
cttttgaaaa tcctcttagga ggctcctcctt cgcattggcctt gcagtctgca gcagccccga 60
gttggtttctt cgctgatcgg atttctttcc tccaggtaga gttttcttttgc cttatgttga 120
attccattgc ctctttctc atcacagaag tgatgttggatcgtttctt ttgtttgtct 180
gattttaggt ttttttaagt ataaacaaaaa gttttttattt agcattctga aagaaggaaa 240
gtaaaaatgtt caagtttaat aaaaaggggc cttccctttt agaataaattt tcagcatgtg 300
ctttcaaaaaa a 311
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<210> 104
<211> 338
<212> DNA
<213> Homo sapiens
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<220>
<221> misc_feature
<222> (32)..(32)
<223> "n" is any nucleotide.
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```
<220>
<221> misc_feature
<222> (67)..(67)
```

Part 1b

<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (136)..(136)
<223> "n" is any nucleotide.

<400> 104
ggctctggcag ggatgggtt gccttggaa ancctctagg aggctcctcc tcgcatggcc 60
tgcagtnctg gcagcagacc ccgagttgtt tcctcgctga tcgatttctt tacccccagg 120
tagagtttc ctttgnctta tggtaattc cattgcctct ttactcatc acagaagtga 180
tggtaattc gtttctttt tttgtctgat ttatggttt ttaagtata aacaaaagtt 240
ttttatttagc attctgaaag aaggaaagta aaatgtacaa gtttaataaa aaggggcctt 300
cccttttaga ataaaaaaaaaaaaaaa 338

Part 1c

<210> 105
<211> 343
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (13)..(13)
<223> "n" is any nucleotide.

Part 1d

<220>
<221> misc_feature
<222> (19)..(19)
<223> "n" is any nucleotide.

<220>
<221> misc_feature
<222> (107)..(107)
<223> "n" is any nucleotide.

<400> 105
ccctgggtcc tgncaaggna tggggtttgc tttggaaatc ctcttaggag gtcctcctc 60
gcattggcctg cagtctggca gcagcccgaa gttgtttctt cgctgancga tttctttcct 120
ccaggttagag ttttcttgc ttatgttcaa ttccattgcc tctttctca tcacagaagt 180
gatgttggaa tcgtttctt tgggtgtctg atttatggtt ttttaagta taaacaaaag 240
ttttttatc gcattctgaa agaaggaaag taaaatgtac aagtttaata aaaagggcc 300

Dot B
A5
ANT

ttccccctta gaataaaaaa aaaaaaaaaa aaaaaaaaaa aaa

343